

Amendments to the Claims

1. (Previously Presented) A recombinant DNA construct comprising a polynucleotide selected from the group consisting of a polynucleotide comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1-3549.
2. (Previously Presented) A recombinant DNA construct comprising a polynucleotide selected from the group consisting of a polynucleotide encoding a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NO: 3550-7098.
3. (Previously Presented) A method of producing a plant having an improved property, wherein said method comprises transforming a plant with a recombinant construct comprising a promoter region functional in a plant cell operably joined to a polynucleotide comprising coding sequence for a polypeptide associated with said property, and growing said transformed plant, wherein said polypeptide is selected from the group consisting of:
 - a) a polypeptide useful for improving plant cold tolerance, wherein said polypeptide comprises a sequence identified as such in Table 1;
 - b) a polypeptide useful for manipulating growth rate in plant cells by modification of the cell cycle pathway, wherein said polypeptide comprises a sequence identified as such in Table 1;
 - c) a polypeptide useful for improving plant drought tolerance, wherein said polypeptide comprises a sequence identified as such in Table 1;
 - d) a polypeptide useful for providing increased resistance to plant disease, wherein said polypeptide comprises a sequence identified as such in Table 1;

- e) a polypeptide useful for galactomannan production, wherein said polynucleotide comprises a sequence identified as such in Table 1;
- f) a polypeptide useful for production of plant growth regulators, wherein said polypeptide comprises a sequence identified as such in Table 1;
- g) a polypeptide useful for improving plant heat tolerance, wherein said polypeptide comprises a sequence identified as such in Table 1;
- h) a polypeptide useful for improving plant tolerance to herbicides, wherein said polypeptide comprises a sequence identified as such in Table 1;
- i) a polypeptide useful for increasing the rate of homologous recombination in plants, wherein said polypeptide comprises a sequence identified as such in Table 1;
- j) a polypeptide useful for lignin production, wherein said polypeptide comprises a sequence identified as such in Table 1;
- k) a polypeptide useful for improving plant tolerance to extreme osmotic conditions, wherein said polypeptide comprises a sequence identified as such in Table 1;
- l) a polypeptide useful for improving plant tolerance to pathogens or pests, wherein said polypeptide comprises a sequence identified as such in Table 1;
- m) a polypeptide useful for yield improvement by modification of photosynthesis, wherein said polynucleotide comprises a sequence identified as such in Table 1;
- n) a polypeptide useful for modifying seed oil yield and/or content, wherein said polypeptide comprises a sequence identified as such in Table 1;
- o) a polypeptide useful for modifying seed protein yield and/or content, wherein said polypeptide comprises a sequence identified as such in Table 1;

- p) a polypeptide encoding a plant transcription factor, wherein said polypeptide comprises a sequence identified as such in Table 1;
- q) a polypeptide useful for yield improvement by modification of carbohydrate use and/or uptake, wherein said polypeptide comprises a sequence identified as such in Table 1;
- r) a polypeptide useful for yield improvement by modification of nitrogen use and/or uptake, wherein said polypeptide comprises a sequence identified as such in Table 1;
- s) a polypeptide useful for yield improvement by modification of phosphorus use and/or uptake, wherein said polypeptide comprises a sequence identified as such in Table 1; and
- t) a polypeptide useful for yield improvement by providing improved plant growth and development under at least one stress condition, wherein said polypeptide comprises a sequence identified as such in Table 1.

4. (New) A substantially purified nucleic acid molecule comprising a nucleic acid sequence wherein said nucleic acid sequence:

(a) hybridizes under stringent conditions to a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either, or

(b) exhibits a 90% or greater identity to a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either.

5. (New) The substantially purified nucleic acid molecule of claim 4, wherein said nucleic acid molecule encodes a protein selected from the group consisting of a *Zea mays* protein, an *Oryza sativa* protein, a *Glycine max* protein, and fragments thereof.

6. (New) The substantially purified nucleic acid molecule of claim 5 wherein said nucleic acid molecule encodes a *Zea mays* protein or fragment thereof.
7. (New) The substantially purified nucleic acid molecule of claim 5, wherein said nucleic acid molecule encodes an *Oryza sativa* protein or fragment thereof.
8. (New) The substantially purified nucleic acid molecule of claim 5, wherein said nucleic acid molecule encodes a *Glycine max* protein or fragment thereof.
9. (New) A substantially purified nucleic acid molecule comprising a nucleic acid sequence that shares between 100% and 90% sequence identity with a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either.
10. (New) The substantially purified nucleic acid molecule of claim 9, wherein said nucleic acid sequence shares between 100% and 95% sequence identity with a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either.
11. (New) The substantially purified nucleic acid molecule of claim 10, wherein said nucleic acid sequence shares between 100% and 98% sequence identity with a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either.
12. (New) The substantially purified nucleic acid molecule of claim 11, wherein said nucleic acid sequence shares between 100% and 99% sequence identity with a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either.

13. (New) The substantially purified nucleic acid molecule of claim 12, wherein said nucleic acid sequence shares 100% sequence identity with a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either.

14. (New) A substantially purified polypeptide, wherein said polypeptide is encoded by a nucleic acid molecule comprising a nucleic acid sequence, wherein said nucleic acid sequence:

(a) hybridizes under stringent conditions to a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either, or

(b) exhibits a 90% or greater identity to a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549, a complement thereof or a fragment of either.

15. (New) A substantially purified polypeptide comprising an amino acid sequence that exhibits a 90% or greater identity to an amino acid sequence selected from the group consisting of SEQ ID NO: 3550 through SEQ ID NO: 7098, or a fragment thereof.

16. (New) A substantially purified polypeptide comprising an amino acid sequence that shares between 100% and 90% sequence identity with an amino acid sequence selected from the group consisting of SEQ ID NO: 3550 through SEQ ID NO: 7098, or a fragment thereof.

17. (New) The substantially purified polypeptide of claim 16, wherein said amino acid sequence shares between 100% and 95% sequence identity with an amino acid sequence selected from the group consisting of SEQ ID NO: 3550 through SEQ ID NO: 7098, or a fragment thereof.

18. (New) The substantially purified polypeptide of claim 17, wherein said amino acid sequence shares between 100% and 98% sequence identity with an amino acid sequence selected from the group consisting of SEQ ID NO: 3550 through SEQ ID NO: 7098, or a fragment thereof.

19. (New) The substantially purified polypeptide of claim 18, wherein said amino acid sequence shares between 100% and 99% sequence identity with an amino acid sequence selected from the group consisting of SEQ ID NO: 3550 through SEQ ID NO: 7098, or a fragment thereof.

20. (New) The substantially purified polypeptide of claim 19, wherein said amino acid sequence shares 100% sequence identity with an amino acid sequence selected from the group consisting of SEQ ID NO: 3550 through SEQ ID NO: 7098, or a fragment thereof.

21. (New) A transformed plant having a nucleic acid molecule which comprises:

(a) an exogenous promoter region which functions in a plant cell to cause the production of an mRNA molecule; which is linked to;

(b) a structural nucleic acid molecule, wherein said structural nucleic acid molecule comprises a nucleic acid sequence, wherein said nucleic acid sequence

(i) hybridizes under stringent conditions to a nucleic acid sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO:3549, a complement thereof or a fragment of either; or

(ii) exhibits a 90% or greater identity to a nucleic acid sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO:3549, a complement thereof or a fragment of either,
which is linked to

(c) a 3' non-translated sequence that functions in said plant cell to cause the termination of transcription and the addition of polyadenylated ribonucleotides to said 3' end of said mRNA molecule.

22. (New) The transformed plant according to claim 21, wherein said nucleic acid sequence is a complement of a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549 or a fragment thereof.

23. (New) The transformed plant according to claim 21, wherein said plant is selected from the group consisting of soybean, maize, cotton and wheat.

24. (New) A transformed plant having a nucleic acid molecule comprising a nucleic acid sequence encoding a polypeptide having an amino acid sequence, wherein said amino acid sequence exhibits a 90% or greater identity with an amino acid sequence selected from the group consisting of SEQ ID NO: 3550 through SEQ ID NO: 7098, or a fragment thereof.

25. (New) A transformed seed comprising a transformed plant cell comprising a nucleic acid molecule which comprises:

(a) an exogenous promoter region which functions in said plant cell to cause the production of an mRNA molecule; which is linked to;

(b) a structural nucleic acid molecule, wherein said structural nucleic acid molecule comprises a nucleic acid sequence, wherein said nucleic acid sequence

(i) hybridizes under stringent conditions to a nucleic acid sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO: 3549, a complement thereof or a fragment of either; or

(ii) exhibits a 90% or greater identity to a nucleic acid sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO:3549, a complement thereof or a fragment of either,
which is linked to

(c) a 3' non-translated sequence that functions in said plant cell to cause the termination of transcription and the addition of polyadenylated ribonucleotides to said 3' end of said mRNA molecule.

26. (New) The transformed seed according to claim 25, wherein said nucleic acid sequence is a complement of a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 3549 or a fragment thereof.

27. (New) The transformed seed according to claim 25, wherein said seed is selected from the group consisting of soybean, maize, cotton and wheat seed.

28. (New) The transformed seed according to claim 25, wherein said exogenous promoter region functions in a seed cell.

29. (New) The transformed seed according to claim 25, wherein said exogenous promoter region functions in a leaf cell.

30. (New) A transformed seed comprising a transformed plant cell comprising a nucleic acid molecule comprising a nucleic acid sequence encoding a polypeptide having an amino acid sequence, wherein said amino acid sequence exhibits a 90% or greater identity with an amino acid sequence selected from the group consisting of SEQ ID NO: 3550 through SEQ ID NO: 7098, or a fragment thereof.